

TECHNICAL DATA SHEET

CyFlow™ CD86 Purified Anti-Ms; Clone GL-1

REF BC991050

For Research Use Only.

Not for use in diagnostic or therapeutic procedures.

Specifications

Antigen	CD86
Alternative Names	B70, B7-2
Clone	GL-1
Clonality	monoclonal
Format	Purified
Host / Isotype	Rat / IgG2a
Species Reactivity	Mouse
Negative Species Reactivity	—
Quantity [Concentration]	0.1 mg [1 mg/ml]
Immunogen	LPS-activated CBA/Cs mouse splenic B cells

Specificity

The rat monoclonal antibody GL-1 recognizes CD86 antigen, a 70-80 kDa type I transmembrane glycoprotein of immunoglobulin supergene family, expressed on professional antigen-presenting cells, such as dendritic cells, macrophages or activated B lymphocytes.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

Application

Based on published sources, this antibody is suitable for the following applications:

- Flow cytometry
- Immunoprecipitation
- Immunohistochemistry (frozen sections)
- Immunocytochemistry
- Functional assays

Storage Buffer

The reagent is provided in phosphate buffered saline (PBS) solution, pH $\approx$ 7.4, containing 0.1% (w/v) sodium azide.

Storage and Stability

Storage	Avoid prolonged exposure to light. Store in the dark at 2-8°C. Do not freeze.
Stability	Do not use after expiration date stamped on vial label.

Background Information

CD86 (B7-2) and CD80 (B7-1) are ligands of T cell critical costimulatory molecule CD28 and of an inhibitory receptor CD152 (CTLA-4). Both B7 molecules are expressed on professional antigen-presenting cells and are essential for T cell activation, both molecules can also substitute for each other in this process. The question what are the differences in CD80 and CD86 competency has not been fully elucidated yet; there are still conflicts in results about their respective roles in initiation or sustaining of the T cell immune response.

References

- Hathcock KS, Laszlo G, Dickler HB, Bradshaw J, Linsley P, Hodes RJ: Identification of an alternative CTLA-4 ligand costimulatory for T cell activation. Science. 1993 Nov 5; 262(5135):905-7. < PMID: 7694361 >
- Benschop RJ, Melamed D, Nemazee D, Cambier JC: Distinct signal thresholds for the unique antigen receptor-linked gene expression programs in mature and immature B cells. J Exp Med. 1999 Sep 20; 190(6):749-56. < PMID: 10499913 >

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com

- Brasel K, De Smedt T, Smith JL, Maliszewski CR: Generation of murine dendritic cells from flt3-ligand-supplemented bone marrow cultures. Blood. 2000 Nov 1; 96(9):3029-39. < PMID: 11049981 >
- Chung JB, Wells AD, Adler S, Jacob A, Turka LA, Monroe JG: Incomplete activation of CD4 T cells by antigen-presenting transitional immature B cells: implications for peripheral B and T cell responsiveness: implications for peripheral B and T cell responsiveness. J Immunol. 2003 Aug 15; 171(4):1758-67. < PMID: 12902475 >
- Steptoe RJ, Ritchie JM, Jones LK, Harrison LC: Autoimmune diabetes is suppressed by transfer of proinsulin-encoding Gr-1+ myeloid progenitor cells that differentiate in vivo into resting dendritic cells. Diabetes. 2005 Feb; 54(2):434-42. < PMID: 15677501 >
- Radhakrishnan S, Arneson LN, Upshaw JL, Howe CL, Felts SJ, Colonna M, Leibson PJ, Rodriguez M, Pease LR: TREM-2 mediated signaling induces antigen uptake and retention in mature myeloid dendritic cells. J Immunol. 2008 Dec 1; 181(11):7863-72. < PMID: 19017976 >
- Nolan A, Weiden M, Kelly A, Hoshino Y, Hoshino S, Mehta N, Gold JA: CD40 and CD80/86 act synergistically to regulate inflammation and mortality in polymicrobial sepsis. Am J Respir Crit Care Med. 2008 Feb 1; 177(3):301-8. < PMID: 17989345 >
- Edgton KL, Kausman JY, Li M, O'Sullivan K, Lo C, Hutchinson P, Yagita H, Holdsworth SR, Kitching AR: Intrarenal antigens activate CD4+ cells via co-stimulatory signals from dendritic cells. J Am Soc Nephrol. 2008 Mar; 19(3):515-26. < PMID: 18184859 >
- Nolan A, Kobayashi H, Naveed B, Kelly A, Hoshino Y, Hoshino S, Karulf MR, Rom WN, Weiden MD, Gold JA: Differential role for CD80 and CD86 in the regulation of the innate immune response in murine polymicrobial sepsis. PLoS One. 2009 Aug 12; 4(8):e6600. < PMID: 19672303 >

The Safety Data Sheet for this product is available at www.sysmex-partec.com/services.

Contact Information:

Sysmex Partec GmbH • Am Flugplatz 13 • 02828 Görlitz • Germany
Tel +49 3581 8746 0 • Fax +49 3581 8746 70 • E-mail: info@sysmex-partec.com